DigiNet SERIES

USER MANUAL

COMPANY NA STAGE & LIGHT

Company NA
9 Lambertu str.
Marupe, LV-2167, Latvia
Phone: +371 6780 1111
Fax: +371 6755 6505
e-mail: na@na.lv
www.na.lv

TABLE OF CONTENTS

1. BEFORE YOU BEGIN..... 3

WHAT IS INCLUDED 3
UNPACKING INSTRUCTIONS 3
AC POWER 3
CONTACT US 3
SAFETY INSTRUCTIONS 4

2. INTRODUCTION 5

FEATURES 5
Description 5
DigiNet rackmount OVERVIEW 5
DigiNet W wallmount OVERVIEW 6

3. SETUP..... 7

FUSE REPLACEMENT 7
FIXTURE LINKING 7
Data Cabling 7
DMX port 8
DMX connectors 8
3-Pin to 5-Pin Conversion Chart 8
Ethernet connector 9
Ethernet port LED indicators 9

4. DigiNet Configuraton 9

Configuration using control panel display 9
Menu Tree 10
Network setup 10
Routing setup 11
Load configuration 11
Configuration using built-in web page 11

5. Mounting 13

DigiNet rackmount 13
DigiNet W wallmount 13

6. APPENDIX..... 14

DMX PRIMER 14
RETURNS PROCEDURE 14
CLAIMS 14
DigiNet TECHNICAL SPECIFICATIONS 15
DigiNet WTECHNICAL SPECIFICATIONS 16

1. BEFORE YOU BEGIN

What is included

- ► 1 x DigiNet or DigiNet_W unit
- ► 1 x Warranty Card
- ► 1 x Users Manual

Unpacking Instructions

Immediately upon receiving a unit, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton it self shows signs of mishandling. Save the carton and all packing materials. In the event that a unit must be returned to the factory, it is important that the unit be returned in the original factory box and packing.

AC Power

The only thing necessary to do before powering on the unit is to make sure the line voltage you are applying is within the range of accepted voltages. This unit will accommodate 230V AC. All units must be powered directly off a switched circuit and cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch.

Contact Us

General Information **„Company NA”**

Addres: 9 Lambertu street, Marupe, LV-2167, Latvia
Phone: +37167801110
Fax: +37167556505
e-mail: kompanija@na.lv
web: www.na.lv

Safety Instructions

Please read these instructions carefully, which includes important information about the installation, usage and maintenance of this product.

- Please keep this User manual for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Always make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the unit.
- Make sure there are no flammable materials close to the unit while operating.
- Always disconnect from power source before servicing or replacing fuse and be sure to replace with same fuse source.
- Secure unit to fastening device using a safety chain.
- Maximum ambient temperature (Ta) is (40°C). Do not operate unit at temperatures higher than this.
- In the event of a serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- Don't connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.
- Avoid direct eye exposure to the light source while it is on.

Caution! ***There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact „Company NA" at: +37167801110.***

2. INTRODUCTION

Device Description

The DigiNet is bidirectional Art-Net to DMX rack mount converter. It has four DMX-512 ports which can be individually configured as inputs or outputs.
All DMX ports have separate optical and galvanic isolation. Ethernet is 10/100Base-T with auto-negotiation. Configuration can be done on device using screen and buttons or remotely with build-in web server. Firmware updates through ethernet. RDM support in future. Each DMX port has status LEDs which indicate data activity (in or out).
Ethernet connector has two status LEDs which indicate link state and data activity.

Features

- Art-net to DMX-512 signal converter
- DMX ports: 4
- Ethernet port: 1
- Variable each of DMX ports configuration (as input or output)
- Ethernet port activity and link LED status indicators
- DMX port LED status indicators
- Control panel Display

Additional Features

- Available in Rack mount or Wall mount body

DigiNet Rackmount unit Overview

DigiNet Wallmount unit Overview

3. SETUP

Disconnect the power cord before replacing a fuse and always replace with the same type fuse.

Fuse Replacement

The fuse for DigiNet is located outside the chassis. Remove the damaged fuse from its holder and replace with exact same type fuse. Reconnect power.

Fixture Linking

You will need a DMX data link to run light shows of one or more fixtures using a DMX-512 lighting console. The combined number of channels required by all the fixtures on a DMX data link determines the number of fixtures the DMX data link can support.

Important: Fixtures on a DMX data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended DMX data link distance between fixtures: 300 meters (984 ft.)

DMX DATA CABLE

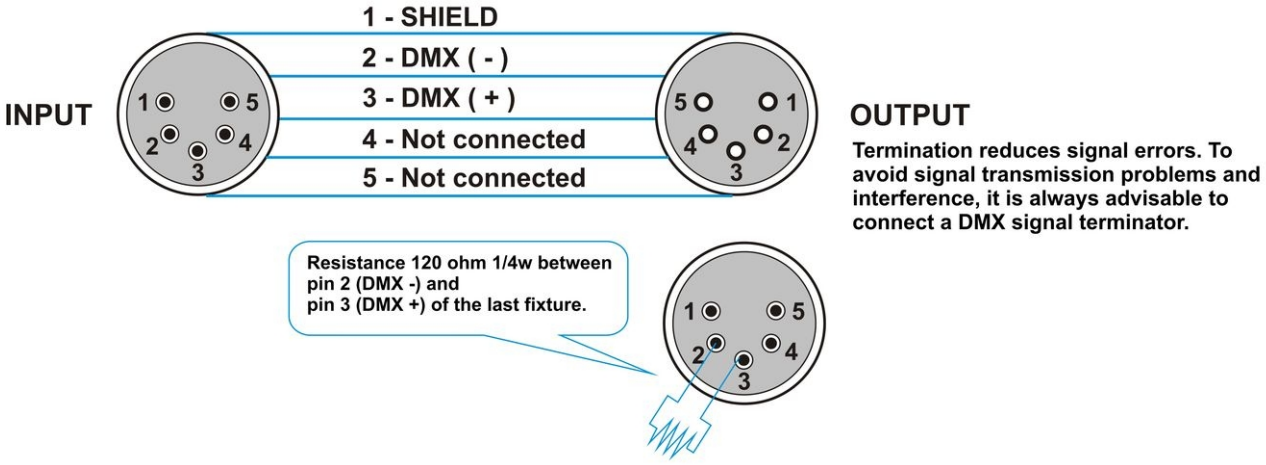
Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable will have the following characteristics:

2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 30 pF/ft.
Maximum capacitance between conductor and shield – 55 pF/ft.
Maximum resistance of 20 ohms / 1000 ft.
Nominal impedance 100 – 140 ohms

DMX CONNECTORS

XLR connectors are Neutrik 5-pin XLR female - normaly used for DMX outputs. If ports are used as inputs, male-to-male adapters should be used to change ports to male.

DMX port configuration


1 - SHIELD
2 - DMX (-)
3 - DMX (+)
4 - Not connected
5 - Not connected
INPUT
OUTPUT
Termination reduces signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator.
Resistance 120 ohm 1/4w between pin 2 (DMX -) and pin 3 (DMX +) of the last fixture.

CAUTION **Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.**

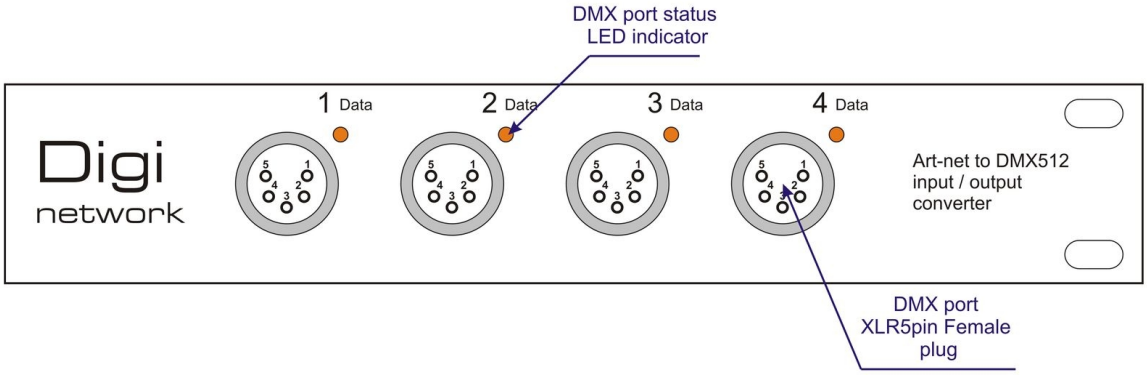
3-PIN TO 5-PIN CONVERSION CHART

NOTE ! **If you use a console with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. The chart below details a proper cable conversion:**

3-PIN TO 5-PIN CONVERSION CHART

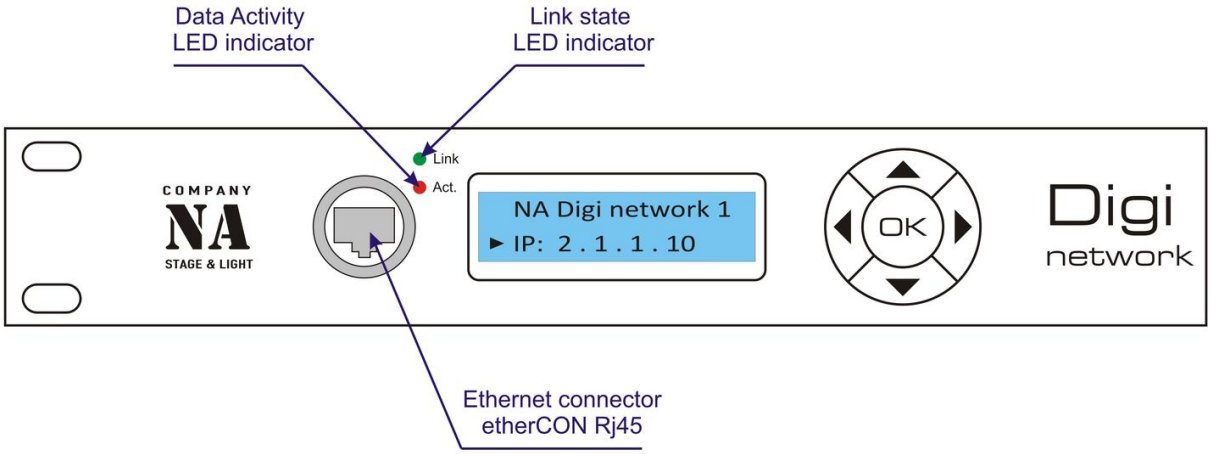
Conductor	**3 Pin Female (output)**	**5 Pin Male (Input)**
Ground / Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Do not use		Do not use
Do not use		Do not use

Each DMX port has status LEDs that indicate data activity (in or out).
All DMX ports have separate optical and galvanic isolation.



Ethernet Connector

Ethernet connector is Neutrik etherCON Rj45. Ethernet is 10 / 100 Base-T with auto-negotiation. Ethernet connector has two status LEDs. Green indicates link state - if it's lit, link is estabilised and communication can be done. If ethernet cable is connected, but Link LED is off, check cable or device at other end of ethernet cable. Act. LED shows data activity - every time ethernet packet is sent or recieved, LED blinks once.

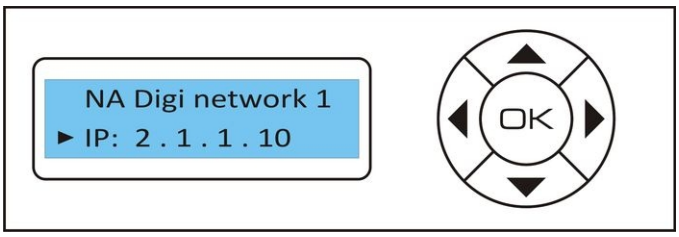


4. DigiNet Configuration

DigiNet can be configured locally on device using control panel display and buttons or remotley through ethernet by accesing built-in web page with ethernet browser.

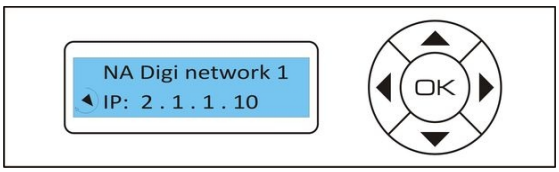
Configuration using control panel display

Navigation trough menu is done using 4-direction keypad with central key as OK (confirm) key.

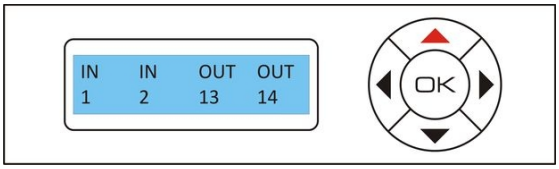


Up / Down keys are used to change status screens.
There are 4 screens aviable:

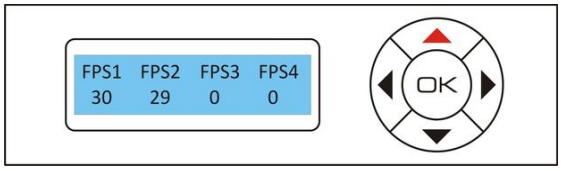
1. Shows device name and IP address



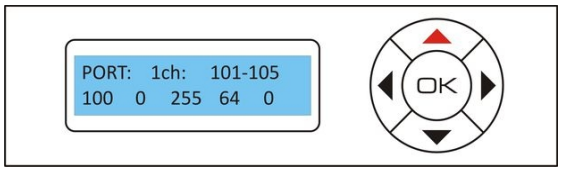
2. Shows port directions and universes assigned



3. Shows DMX IN packet reate per second

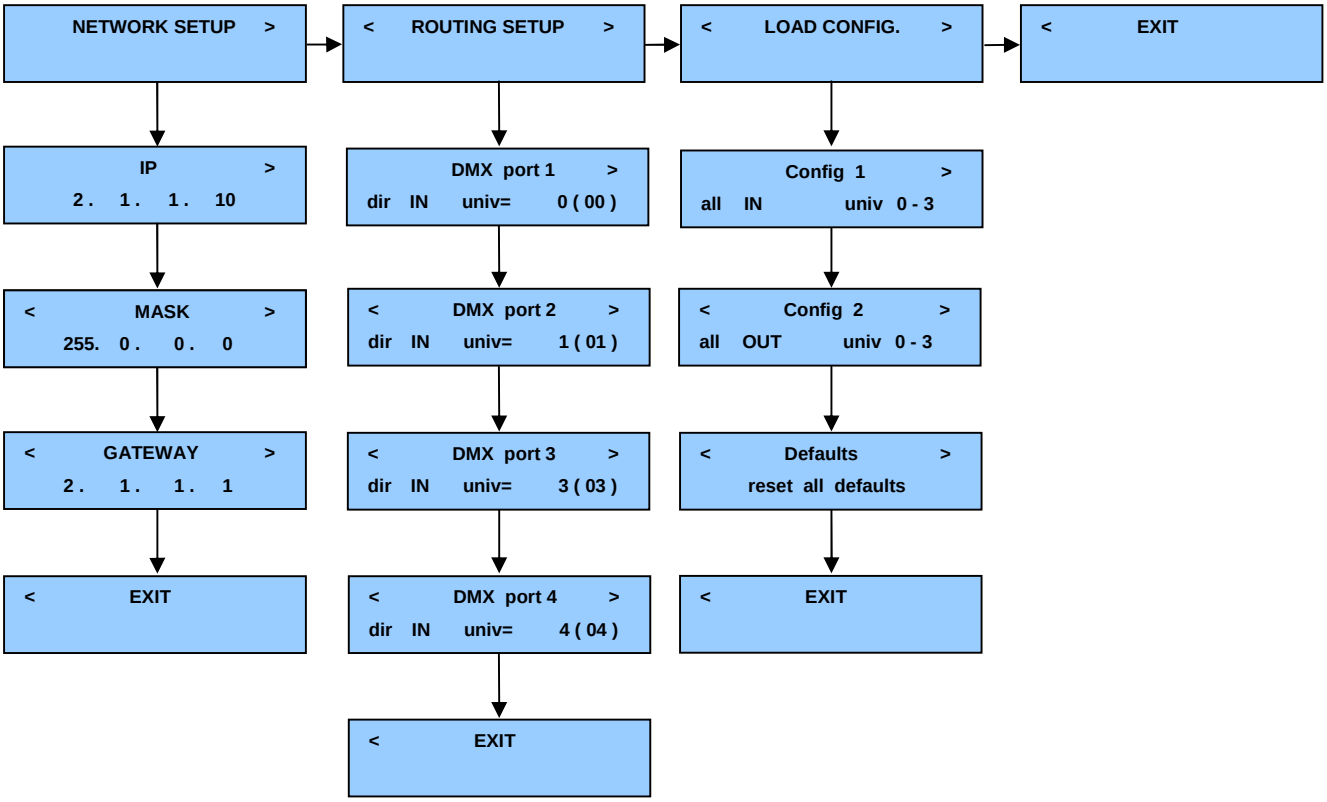


4. Shows DMX values, current channels can be changed using Left / Right buttons



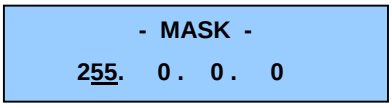
DigiNet Menu Tree

To enter Main menu, press OK key. Select Sub-menu with Left/Right keys and confirm with OK. To exit menu, press Right until You see " EXIT " and press OK.



Network Setup

Here You can change Ethernet settings: IP address, Subnet Mask and Gateway.
Use Left/Right to select parameter. To edit, press OK. Up/Down changes value, Left/Right selects field to edit. Press OK again to save changes made. To exit, press Right until You see " EXIT " and press OK.



Routing Setup

Here You can change DMX routing settings – set individual port directions (IN or OUT) and select Art-Net universe for each port. Art-Net universe is displayed in 2 formats – decimal and hexadecimal (hex value is in braces).
Use Left/Right to select port. To edit, press OK. Left selects direction field, right selects universe field. Up/Down changes value. Press OK again to save changes made. To exit, press Right until You see " EXIT " and press OK.

- DMX port 1 -
dir OUT univ= 1 (01)

Load configuration

Here You can load pre-defined configurations and reset device to its defaults:

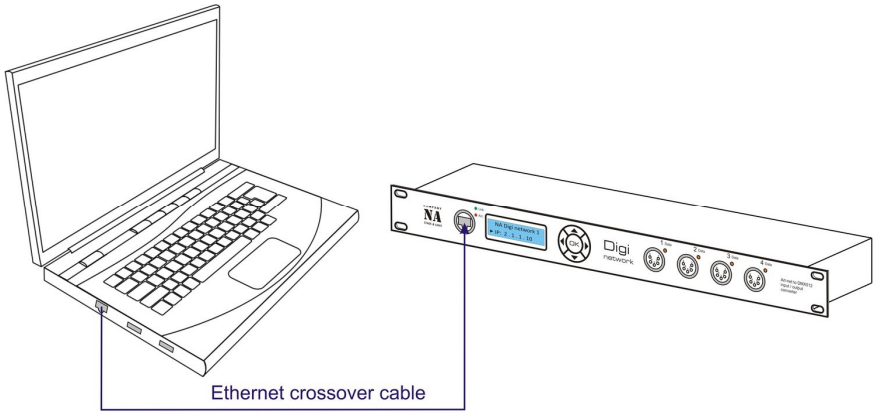
1) *Config 1* - sets ports to inputs and sets universes 0 trough 3 for each port.
2) *Config 2* - sets ports to outputs and sets universes 0 trough 3 for each port.
3) *Defaults* - resets all device settings, including name and network configuration to defaults. Default name is " NA Digi network 1" and default IP is 2.1.1.10.
4) *EXIT* - to exit from main Menu.

Use Left/Right to select configuration. To load, press OK and confirm by selecting YES and pressing OK again. To exit, press Right until You see " EXIT " and press OK.

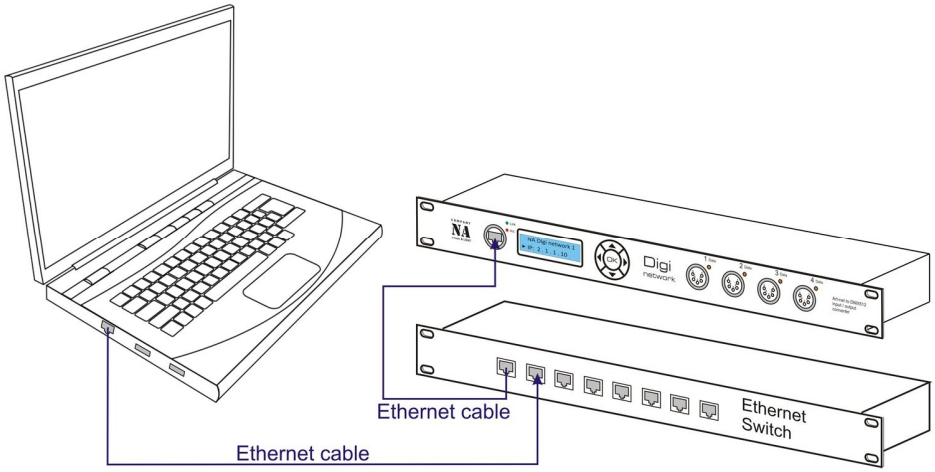
- Config 2 -
all OUT univ 0 - 3

Configuration using built-in web page

All device settings can be changed remotely by accessing built-in web page from computer connected to same network as DigiNet.
To connect DigiNet to your personal computer, use the ethernet crossover cable.

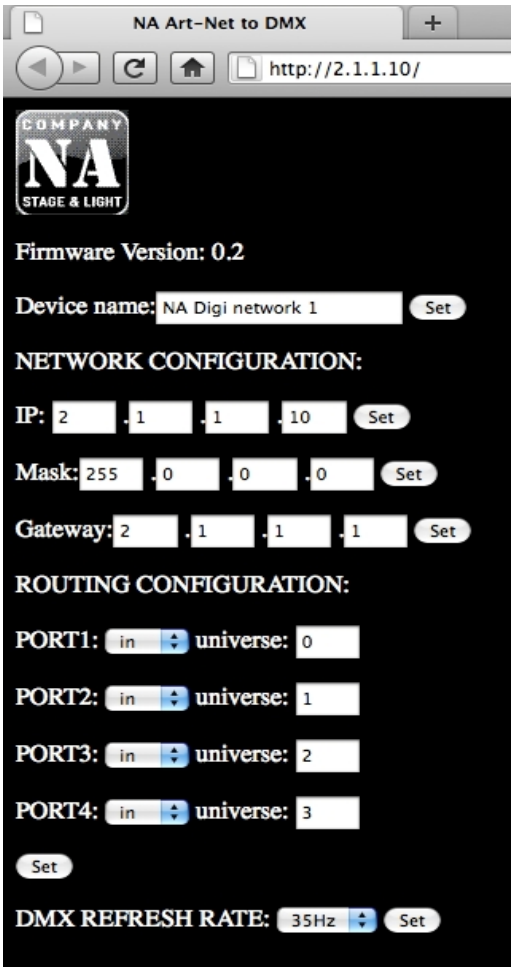


If the ethernet crossover cable is not aviable, then use ethernet switch to connect DigiNet to yor PC.



To acces DigiNet configuration page, just enter device IP address (default 2.1.1.10) in any web browser.

To change any of the parameters, adjust corresponding field and press SET button near it to apply new value.


NA Art-Net to DMX
http://2.1.1.10/
COMPANY
NA
STAGE & LIGHT
Firmware Version: 0.2
Device name: NA Digi network 1 Set
NETWORK CONFIGURATION:
IP: 2 . 1 . 1 . 10 Set
Mask: 255 . 0 . 0 . 0 Set
Gateway: 2 . 1 . 1 . 1 Set
ROUTING CONFIGURATION:
PORT1: in universe: 0
PORT2: in universe: 1
PORT3: in universe: 2
PORT4: in universe: 3
Set
DMX REFRESH RATE: 35Hz Set

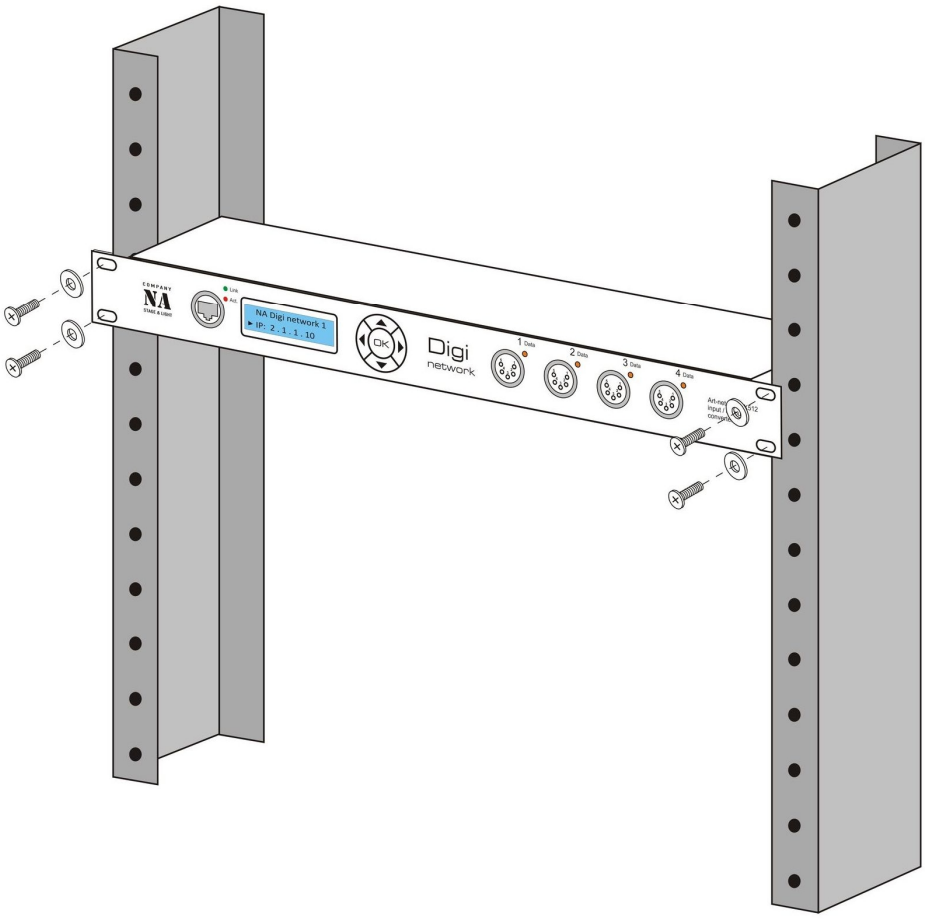
Future firmware versions will include:

- sACN (E1.31) DMX-over-ethernet protocol support;
- firmware upgrades trough ethernet;
- new configuration web page design with extended functionality;
- ability to save and recall configurations.

5. Mounting

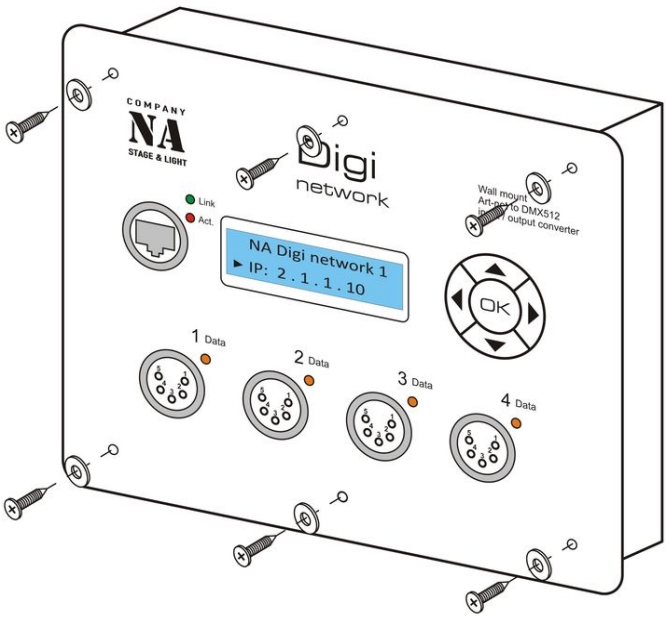
DigiNet rackmount unit

DigiNet comes in a 19" 1 unit high metal housing. This unit may be mounted in any position provided there is adequate room for ventilation. The unit corps is intended for the insertion of rack (rackmount).



DigiNet wallmount unit

This unit may be mounted in any position provided there is adequate room for ventilation.
The unit corps is meant for installation at room walls (wallmount).



6. APPENDIX

DMX Primer

There are 512 channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the lighting console. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

DMX fixtures are designed to receive data through a DMX Chain. A DMX Chain connection is where the DMX OUT of one fixture connects to the DMX IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a lihgting console communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data positive (S+). Company NA carries 3-pin and 5-pin XLR DMX compliant cables.

Returns Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Merchandise Authorization Number (RMA #). Products returned without an RMA # will be refused. Call Company NA and request RMA # prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Company NA reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA #, please include the following information on a piece of paper inside the box:

1) Your name
2) Your address
3) Your phone number
4) The RMA #
5) A brief description of the symptoms

Claims

Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise. It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Any other claim for items such as missing component/part, damage not related to shipping, and concealed damage, must be made within seven (7) days of receiving merchandise.

DigiNet Technical Specifications

WEIGHT & DIMENSIONS

Length .....482,6 mm
Width .....100 mm
Height .....44,5 mm
Weight ..... 1,5 kg
Body ..... 19" 1 unit rackmount

POWER

Operating Voltage .....~ 85 - 265 VAC, 50/62 Hz
Power Consumption .....10W max.
DMX port isolation..... Optical up to 1000 V

THERMAL

Maximum ambient temperature.....+40°C
Minimum ambient temperature..... .....-20°C
Cooling .... conventional

SIGNALS & CONNECTORS

DMX ports ..... 4 units , Neutrik XLR5 female
Ethernet port ..... 1 unit , etherCON Rj45
DMX port pin config. ....pin 1 shield, pin 2 (-), pin 3 (+), pin 4 don't use, pin 5 don't use
Signal processing..... Art-net to DMX-512 converter
Ethernet ..... 10 / 100Base-T with auto-negotiation
Configuration ..... using DigiNet control panel or with PC using built-in web server

WARRANTY INFORMATION

Warranty..... 2-year limited warranty

DigiNet W Technical Specifications

WEIGHT & DIMENSIONS

Housing Length .....180,0 mm
Housing Width .....55,0 mm
Housing Height .....140,0 mm
Front panel Length .....200,0 mm
Front panel Width .....3,0 mm
Front panel Height .....160,0 mm
Weight ..... 1,5 kg
Body ..... wallmount

POWER

Operating Voltage .....~ 85 - 265 VAC, 50/62 Hz
Power Consumption .....10W max.
DMX port isolation..... Optical up to 1000 V

THERMAL

Maximum ambient temperature.....+40°C
Minimum ambient temperature..... .....-20°C
Cooling .... conventional

SIGNALS & CONNECTORS

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